

REMARKS/ARGUMENTS

General Remarks

Applicants thank Examiner Ferguson for the courtesy of an interview extended to Applicants' representative on January 20, 2010. During the interview the claims were discussed in light of the cited references. More specifically, potential amendments toward the nature of the claimed titanium oxide (B) were discussed. Amendments and arguments similar to those discussed during the interview are presented below.

Claim Status

Claims 1 and 3-21 are pending. Claim 2 was previously canceled without prejudice. Claims 1, 7 and 13 are currently amended to further specify that the claimed component (B) titanium oxide "having a surface acid amount of 10 micromole/g or more and having a surface base amount of 10 micromole/g or more" which finds support in the specification: page 30, line 18, to page 31, line 8; page 48, lines 11-19; and page 66, lines 12-18. Claim 21 is added and finds support in the specification: page 33, line 15, to page 35, line 5; and page 48, lines 6-10. No new matter is believed to have been entered.

§103(a) Rejections

Claims 1 and 3-6 are rejected under 35 U.S.C. §103(a) as obvious in view of the combination of *Hirai* (US 6,664,313) and *Nodera* (US 6,001,929). Claims 7-20 are rejected under 35 U.S.C. §103(a) as obvious in view of the combination of *Hirai*, *Nodera* and *Ekinaka* (US 6,846,567). Applicants respectfully traverse these rejections.

The claimed invention is drawn toward a light reflection sheet comprising a polycarbonate resin comprising 60-85 mass% of (A) a polycarbonate base polymer and 15-40 mass% of (B) titanium oxide having a surface acid amount of 10 micromole/g or more and

having a surface base amount of 10 micromole/g or more, wherein (A) comprises (A-1) a polycarbonate-polyorganosiloxane copolymer and (A-2) a polycarbonate resin (see claim 1, in part).

At the outset Applicants note that none of *Hirai*, *Nodera* or *Ekinaka* disclose “titanium oxide having a surface acid amount of 10 micromole/g or more and having a surface base amount of 10 micromole/g or more” as claimed. Accordingly, Applicants submit that no combination of these three references can suggest (i.e., render obvious) that which they are silent on. As such, Applicants request withdrawal of this rejection as the Office has failed to put forth a *prima facie* case of obviousness with respect to the independent claims (i.e., claims 1, 7 and 13) since each independent claims requires such a titanium oxide.

Notwithstanding the above, Applicants submit that the cited references, alone or in combination, do not render obvious the claimed invention for at least the following reasons.

Hirai discloses a polycarbonate resin composition comprising: (a) 100 parts by weight of an aromatic polycarbonate resin, (b) 3 to 30 parts by weight of titanium oxide, (c1) 0.01 to 9 parts by weight of silica, (c2) 0.01 to 9 parts by weight of polyorganosiloxane polymer, and (d) 0.01 to 5 parts by weight of polytetrafluoroethylene (see Abstract; claim 1). *Hirai* also discloses that the preferred content of the titanium oxide is 5-25 parts by weight but that the most preferred content of the titanium oxide is 8-20 parts by weight, based on 100 parts by weight of the aromatic polycarbonate resin (a) (see col. 4, lines 57-60). However, it should also be noted that only 14 parts by weight of titanium oxide is shown to be successful in each of the 15 examples of *Hirai*.

Accordingly, one skilled in the art would recognize that *Hirai* discloses increasingly preferred working amounts of titanium oxide that are steadily decreasing (i.e., least preferred = 3-30 pbw, intermediately preferred = 5-25 pbw, preferred = 8-20 pbw, and most preferred =

14 pbw as exemplified in all 15 examples). Therefore, in light of *Hirai*, as a whole, which has shown (i) a trend of decreasing the amounts of titanium oxide used and (ii) working embodiments of only 14 parts by weight of titanium oxide, Applicants submit that one skilled in the art would consider *Hirai* to suggest titanium oxide amounts of no more than 14 parts by weight. Thus, Applicants further submit that one skilled in the art, upon reading *Hirai*, would lack the motivation to consider “increased” amounts of titanium oxide above 14 parts by weight.

Furthermore and as mentioned above, none of the cited references disclose the claimed *15-40 mass%* of titanium oxide *having a surface acid amount of 10 micromole/g or more and having a surface base amount of 10 micromole/g or more*.

Applicants submit that surface roughening and irregularity in sheet thickness can be due to the increasingly significant amount of water present as the amount of titanium oxide is increased, especially as the amount of a titanium oxide *having a surface acid amount of 10 micromole/g or more and having a surface base amount of 10 micromole/g or more* is increased. Such increased amounts of titanium oxide, and therefore water, can cause foaming which in turn can cause irregular light reflection. Thus, one skilled in the art would understand that increased amounts of titanium oxide typically lead to performance deterioration of the resulting product. Therefore, just as in *Hirai*, one looks to reduce the amount of titanium oxide present.

In contrast to the typical desire to reduce the amounts of titanium oxide used in order to prevent performance deterioration, Applicants claimed invention is capable of retaining excellent product performance even in the presence of a comparatively large amount of titanium oxide. That is the claimed invention does not suffer from surface roughening or irregular sheet thickness despite the inclusion of *15-40 mass%* of titanium oxide *having a surface acid amount of 10 micromole/g or more and having a surface base amount of 10*

micromole/g or more. Clearly, such superior performance of the claimed invention even in the presence of a comparatively large amount of titanium oxide is neither disclosed nor suggested by the cited references.

Furthermore, Applicants bring to the Office's attention the significance of the claimed surface acid amounts and surface base amounts of the claimed titanium oxide:

"A surface acid amount of titanium oxide used in the present invention is preferably 10 micromole/g or more, and a surface base amount thereof is preferably 10 micromole/g or more. If the surface acid amount is smaller than 10 micromole/g or the surface base amount is smaller than 10 micromole/g, a reactivity thereof with the organosiloxane compound which is the stabilizer is reduced, so that titanium oxide is likely to be unsatisfactorily dispersed, and the molded article is likely to be insufficiently increased in a luminance."
(specification: paragraph bridging pages 30-31)

Accordingly, Applicants again submit that since the cited references are silent on such characteristics of the titanium oxide, the cited references cannot then be said to disclose or suggest the titanium oxide as claimed (i.e., having certain surface acid and surface base amounts).

In light of the foregoing, Applicants submit that no combination of *Hirai*, *Nodera* and/or *Ekinaka* renders obvious the claimed invention. As such, Applicants request withdrawal of the obviousness rejections of record.

Prior Art "Not Relied Upon"

Applicants note that the Office recites *Hongo* (US 4,877,831), *Umeda* (US 5,391,600) and *Okumura* (US 5,451,632) as "prior art made of record and not relied upon is considered pertinent to applicant's disclosure" (Office Action, page 8, item 6).

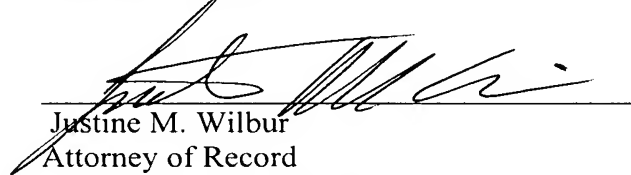
Applicants note that they agree with the Office that these references do not affect the patentability of the claimed invention and are therefore not relied upon for any art rejection of record.

Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the objection and rejections and passage of this case to issue.

Respectfully submitted,

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